

CONCRETE

HOW MUCH DO I NEED? Before commencing concreting operations, sufficient materials should be stockpiled. To calculate quantities required multiply length x width x thickness. Always add between 10 and 15% for wastage. When sand is damp, water quantities may need to be reduced by 20% - for example: 10m (length) x 15m (width) x 50mm (depth) = 10x15x0.05 = 7.5m³.

APPLICATIONS	MIX (in parts)			MATERIALS (required to make 1 cubic metre of concrete)		
	Swan Cement	Sand	Coarse Aggregate	Swan Cement (20kg bags)	Sand (cubic metre)	Coarse Aggregate (cubic metre)
High structural strength concrete for thin reinforced walls, slender reinforced columns, fence posts, heavy duty floors.	1	1.5	3	18	0.5	1
Commonly adopted mixture for reinforced concrete beams, floor slabs, driveways and paths.	1	2.0	4	14	0.5	1
Footings for domestic buildings and walls.	1	2.5	5	12	0.5	1
Toppings for two-course concrete paths.	1	1	2	24	0.5	1
	Note: All above mixes yield an amount of concrete slightly more than the quantity of coarse aggregate used in the mix.			Note: Sand and coarse aggregate figures are rounded to the nearest 1/2 m ³		

BRICKWORK: Clean, sharp well-graded sand, free from loam, clay or other impurities should be used. The presence of a foreign matter will weaken the mortar and affect its setting qualities. Approximately 1 cubic metre is required to lay, 1,800 standard clay bricks.

- General:**
1. All sand should be clean graded, free from excessive clay and fine silts.
 2. Swan 50/50 products will lay approximately 110 standard cored bricks per bag.
 3. Above information is in accordance with the manufacturers recommendations on reverse side of bag.
 4. Above estimates exclude a wastage factor.



Special word of thanks to West Coast College of T.A.F.E. Balga

MELCANN GENERAL PURPOSE CONCRETE MIX

(available in 20kg, 30kg and 40kg bags)
Melcann General Purpose Concrete Mix will cover approximately the following areas:

Size	Coverage
40kg bags	0.4 square metres to a depth of 50mm = 0.020m ³
30kg bags	0.3 square metres to a depth of 50mm = 0.015m ³
20kg bags	0.2 square metres to a depth of 50mm = 0.010m ³

To make 1 cubic metre of concrete you will need the following approximate number of bags of MELCANN GENERAL PURPOSE CONCRETE MIX:

Size	No. of Bags
40kg bags	53 bags
30kg bags	70 bags
20kg bags	105 bags

MELCANN GENERAL PURPOSE MORTAR MIX

Each bag of MELCANN GENERAL PURPOSE MORTAR MIX will make enough mortar to lay the following number of bricks with a 10mm joint:

Size	Concrete Bricks	No. of Bags
40kg bags	20 bricks	40 bags
30kg bags	15 bricks	30 bags
20kg bags	10 bricks	20 bags

Swan Cement

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Ready Reckoner

Your pocket guide to mixing cement

Swan Cement

MORTAR

THE FOLLOWING CALCULATIONS ARE BASED ON APPROXIMATELY 0.6m³ DAMP SAND, WHICH WILL LAY APPROXIMATELY 1,000 STANDARD BRICKS (all mix ratios are calculated by volume) (230L x 110W x 76H)

APPLICATION	BRICK TYPE	MORTAR COLOUR	PRODUCT	CEMENT	LIME	SAND	BAGS PER 1,000 BRICKS
M4 Mortar Classification • Retaining Walls • Below ground walls • External above ground walls (within 1km of coastline) • Walls in industrial environments	Clay (solid)	Grey	Grey Cement & MLime	1	0.5 or 0.25	4.5 or 3	8 Cement + 1.5 Lime 11 Cement + 1 Lime
			Masonry Cement	1		3	11 Masonry Cement
	Clay (cored)	Cream	Brightonlite & Marvelime	1	0.5 or 0.25	4.5 or 3	8 Cement + 1.5 Lime 11 Cement + 1 Lime
Concrete			1				
M3 Mortar Classification • External above ground walls (1km to 10km from coast - excluding retaining or below ground walls) • Walls in contact with fresh water	Clay (solid)	Grey	50/50 Grey	1	0	3	9 - 50/50 Grey
			Grey Cement & Lime	1	1	6	7 Cement + 2.5 Lime
	Clay (cored)	Cream	Masonry Cement	1	0	4	10 Masonry Cement
			Brightonlite	1	1	6	7 Cement + 2.5 Lime
Concrete	Limestone	Cream	1	0	3	9 - 50/50 Cream	
		Federation White	Brightonlite Marvelime	1	1	6	7 Cement + 2.5 Lime (with WHITE bricks Sand)
M2 Mortar Classification • External above ground walls (further than 10km from coastline - excluding retaining or below ground walls) • Internal above ground walls (non-load bearing)	Clay (cored)	Grey	50/50 Grey	1	0	3	9 50/50 Grey
		Cream	50/50 Cream	1	0	3	9 50/50 Cream
	Natural Limestone		Brightonlite & Marvelime	1	2	9	5 Cement + 3.5 Lime

All mortars must be mixed and placed as per AS 3700 2001 Masonry Structure.

(Calculations based on 20kg Bags)

RENDER

THE FOLLOWING CALCULATIONS ARE BASED ON 1.2m³ DAMP SAND FOR EACH M³ OF MORTAR

PRODUCT/APPLICATION	MIX DESIGN			BAGS PER 100M ²	
	Cement	Lime	Sand	Cement	Lime
Internal Walls					
Floating Sand Finish					
20kg Grey Cement/Marvelime 20kg	1	1	6	11	4
20kg Brightonlite/Marvelime 20kg	1	1	6	11	4
50/50 Grey (20kg)	1		3	16	
50/50 Cream (20kg)	1		3	16	
Masonry 20kg	1		5		
Cement Dado					
Base Coat - Grey Cement 20kg	1		3	16	7
Finish Coat - 20kg GP/MVL 20kg	1	1	1.5	20	
External Walls					
Sand Finish/Bag Wash					
Grey Cement/Marvelime	1	1	5	12	5
Brightonlite/Marvelime	1	1	5	12	5
2 Coat Finish					
Base Coat - Grey Cement/Lime	1	0.5	4	15	3
Base Coat - Brightonlite/Lime	1	0.5	4	15	3
Top Coat - Grey Cement/Lime	1	1	6	11	4
Top Coat - Brightonlite/Lime 3mm	1	1	6	11	4
Floor Tiling					
Screeding (10mm)	1		4	16	

(Calculations based on 20kg Bags)